

What is claimed is:

1. A method for collection and storage of traffic data, the method comprising:
- (a) collecting traffic data from a plurality of network elements in a first point of presence in a computer network, wherein traffic data is collected from each network element using a protocol appropriate for the network element;
- (b) analyzing the collected traffic data; and
- (c) transmitting a result of the analysis to a storage device remote from the first point of presence.

2. The invention of Claim 1, wherein (b) comprises predicting traffic demands based on the collected traffic data, and wherein (c) comprises transmitting the predicted traffic demands to the storage device.

3. The invention of Claim 1, wherein a number of bytes required to transmit the result of the analysis to the storage device is less than a number of bytes required to transmit the collected traffic data to the storage device.

4. The invention of Claim 1 further comprising:

(d) analyzing the results stored in the storage device.

5. The invention of Claim 4, wherein (d) comprises determining traffic demands of the computer network based on the results stored in the storage device.

6. The invention of Claim 5 further comprising automatically directing data in the computer network based on the determined traffic demands.

7. The invention of Claim 1 further comprising collecting the results stored in the storage device, analyzing the collected results, and transmitting the results of the analysis of the collected results to a second storage device.

5 8. The invention of Claim 1, wherein (a)-(c) are performed with a first processor located in the first point of presence.

9. The invention of Claim 1, wherein (a)-(c) are performed with a first processor located external to the first point of presence.

10 10. The invention of Claim 1, wherein at least some of the network elements are same type devices from different vendors.

11. The invention of Claim 1, wherein at least some of the network elements are different type devices from different vendors.

12. The invention of Claim 1, wherein at least some of the network elements are different type devices from same vendors.

20 13. The invention of Claim 1, wherein (a)-(c) are performed with a first processor, and wherein the invention further comprises, with a second processor:

(d) collecting traffic data from a plurality of network elements in a second point of presence remote from the storage device, wherein traffic data is collected from each network element in the second point of presence using a protocol appropriate for the network element;

(e) analyzing the traffic data collected in (d); and

(f) transmitting a result of the analysis performed in (e) to the storage device.

14. The invention of Claim 13 further comprising:

(g) analyzing the results transmitted to the storage device from the first and second processors.

15. The invention of Claim 14, wherein (g) comprises determining traffic demands of the computer network based on the results from the first and second processors stored in the storage device, and wherein the invention further comprises automatically directing data in the computer network based on the determined traffic demands.

16. A system for collection and storage of traffic data in a computer network, the system comprising:

a first point of presence in a computer network, the first point of presence comprising a plurality of network elements, each operating with a different protocol;

a storage device remote from the first point of presence; and

a first server coupled with the plurality of network elements, the first server operative to collect traffic data from each of the plurality of network elements using a protocol appropriate for the network element, analyze the collected traffic data, and transmit a result of the analysis to the storage device.

17. The invention of Claim 16, wherein the first server is further operative to predict traffic demands based on the collected traffic data and transmit the predicted traffic demands to the storage device.

18. The invention of Claim 16, wherein a number of bytes required to transmit the result of the analysis from the first server to the storage device is less than a number of bytes required to transmit the collected traffic data from the first server to the storage device.

19. The invention of Claim 16 further comprising a processor operative to analyze the results stored in the storage device.

20. The invention of Claim 19, wherein the second processor is operative to determine traffic demands of the computer network based on the results stored in the storage device and is further operative to automatically direct data in the computer network based on the determined traffic demands.

21. The invention of Claim 16 further comprising a processor operative to collect the results stored in the storage device, analyze the collected results, and transmit the results of the analysis of the collected results to a second storage device.

22. The invention of Claim 16, wherein the first server operates on network topology information of the computer network.

23. The invention of Claim 16, wherein the first server operates on a classification schema describing traffic data to be collected from the plurality of network elements.

24. The invention of Claim 16, wherein the first server comprises a plurality of protocol-specific modules, each of the protocol-specific modules being operative to translate a request for traffic data into a form in accordance with a protocol of a selected network element.

25. The invention of Claim 16, wherein the first server is located in the first point of presence.

26. The invention of Claim 16, wherein the first server is located outside of the first point of presence.

27. The invention of Claim 16, wherein at least some of the network elements are same type devices from different vendors.

28. The invention of Claim 16, wherein at least some of the network elements are different type devices from different vendors.

29. The invention of Claim 16, wherein at least some of the network elements are different type devices from same vendors.

30. The invention of Claim 16 further comprising:  
a second point of presence in the computer network, the second point of presence comprising a plurality of network elements, each operating with a different protocol; and  
a second server coupled with the plurality of network elements in the second point of presence, the second server operative to collect traffic data from each of the plurality of network elements in the second point of presence using a protocol appropriate for the network element, analyze the collected traffic data, and transmit a result of the analysis to the storage device.

31. The invention of Claim 30 further comprising a processor operative to analyze the results transmitted to the storage device from the first and second servers.

32. The system of Claim 31, wherein the processor is operative to determine traffic demands of the computer network based on the results from the first and second servers stored in the storage device and is further operative to automatically direct data in the computer network based on the determined traffic demands.

33. A system for collection and storage of traffic data in a computer network, the system comprising:

means for collecting traffic data from a plurality of network elements in a first point of presence in a computer network, wherein traffic data is collected from each network element using a protocol appropriate for the network element;

means for analyzing the collected traffic data; and

means for transmitting a result of the analysis to a storage device remote from the first point of presence.